Natural Gas Winter Outlook

Winter Heating Season

2004-2005

Executive Summary

The Natural Gas Supply Association's (NGSA) Winter Outlook for the 2004-2005 heating season outlines the association's view of existing natural gas market conditions and fundamentals. This analysis reviews the key pressure points that can affect supply and demand, and ultimately, consumer bills. Generally, NGSA anticipates upward pressure on the natural gas market this winter, compared with the average for last heating season, but on a region-by-region basis, much more of a mixed bag for customers.

- The weather is the largest single factor affecting natural gas demand and customer bills, and it is also the most difficult to predict. According to the National Oceanographic and Atmospheric Administration (NOAA), this will likely be a colder-than-normal heating season in the East and a warmer-than-normal heating season in the West, resulting in continuing price-volatility risks and a more localized or regional market response than experienced last year.
- This winter, NGSA anticipates that the economy will continue to expand, which will yield upward pressure by contributing to significant overall demand growth. Expansion is anticipated in all four major market sectors (residential, commercial, industrial and power generation), further bolstering this upward pressure on wholesale natural gas markets.
- A near-record-high level of natural gas storage is likely and will lead to some additional market stability. However, because natural gas continued to be relatively more expensive during most of the fill season, taking it out of storage as needed also will be costly. These counter-balancing factors should result in flat price pressure, which could easily turn downward if there are fewer heating degree-days than anticipated as the season unfolds.
- Although producers are responding to spot prices with a projected increase in drilling activity (both the rig count and well completions have increased significantly during the past two years), history indicates such a short-term response may only be able to maintain overall production levels. It is likely, therefore, that there will be an ongoing dependence on Canadian and liquefied natural gas (LNG) imports to help offset the accelerating decline-rate among existing "Lower 48" wells. This leads to counter-balancing price pressures within the market.

NGSA does not forecast natural gas prices. However, according to published reports, government and independent analysts are predicting that as a result of the ongoing tight balance between natural gas supply and demand, natural gas prices, now hovering about \$5.50 per million British

thermal units (MMBtu) could average in the \$6 range throughout the heating season. As experienced last year, short-term price spikes in the wholesale spot and futures markets also remain a possibility.

All of these projected pressure points are inter-related. Any deviation from this forecast is likely to affect the other assumptions in this equation. As always, the severity of the winter will undoubtedly be the biggest, single determining factor impacting the market.

Weather/Demand

The National Oceanographic and Atmospheric Administration (NOAA) is forecasting a colder-than-normal winter in the East and a warmer-than-normal winter in the West, based on a 30-year average. This forecast is consistent with projections for a weak El Nino weather pattern this season, which is anticipated to have little additional impact on demand. These factors will tend to lead to slightly more consumption than last year among residential and small commercial customers.

Weather / Demand				
ACTUAL Last Winter	Winter Season	FORECAST This Year		
2003-2004		2004-2005		
Overall: Less than 1% Colder than Normal		East Colder, West Warmer		
WARMER THAN NORMAL	< ACTUAL SEASON	WARMER THAN NORMAL		
NORMAL	No. III. Programov	NORMAL		
NORMAL NORMAL	NOAA's PROJECTION >	GOLDER IHAN -NORMAL		
3628	HEATING DEGREE DAYS	3658-3698		
Winter-To-Winter Pressure On Natural Gas Prices				
		FLAT 5		

Because residential natural gas customers make up 55 percent of all U.S. homes, a normal winter will lead to strong consumption. While a normal winter would serve to support wholesale prices at their present level, a colder weather pattern, as seen in the winter of 2002-03, could lead to further upward pressure in the market, especially if the coldest temperatures are again, as expected, concentrated in those regions that mainly use natural gas for heating: the Northeast, Midwest and Mid-Atlantic states. While not likely, a colder-thannormal winter across the entire U.S. would result in greater volatility and short-term price spikes. If it is a milder-than-normal winter, the opposite is likely.

Economy/Demand

After a year of slow but steady growth, the economy is forecast to continue its expansion through the heating season. According to a number of economic indicators, the likely result will be additional energy demands during the winter.

According to data from the nationally recognized economic forecasting firm Global Insight (formerly DRI-WEFA), gross domestic product (GDP) is expected to increase 3.5 percent from last winter, and inflation is expected to stay in check. Another important factor for natural gas - manufacturing - is projected to grow a dramatic 5.3 percent from this period last year.

Economy / Demand				
ACTUAL Last Winter 2003-2004	Winter Season PERIOD TO PERIOD CHANGE Data Source: Global Insight	FORECAST This Year 2004-2005		
Strengthened	ECONOMY	Continuing Expansion		
4.7%	GDP GROWTH	3.5%		
5.8%	UNEMPLOYMENT RATE	5.4%		
2.5%	MANUFACTURING	5.3%		
1.8%	CPI	2.9%		
	Winter-To-Winter Pressure On Natural Gas Prices	UPWARD 6		

While this increased manufacturing, in particular, is likely to foretell additional energy consumption in the industrial sector, natural gas will capture only a share of that larger end-use market. In fact, as mentioned previously, there are likely to be offsetting reductions, as well, as some industrial customers conserve or switch processing fuels due to the tightness in the market and natural gas prices above the price of their alternative fuel.

According to an independent demand analysis performed by Energy Ventures Analysis (EVA), a number of natural gas-intensive industries have suspended some operations due to fuel-related market conditions.

"With respect to shut-down facilities, two of the most heavily impacted industries are the aluminum and fertilizer industries," according to EVA. "With respect to the latter, approximately 20 percent of U.S. capacity has been shut down without expectation of a restart, and another 25 percent has been temporarily shut down, as a significant portion of the U.S. ammonia-based fertilizer industry can no longer compete with cheaper foreign imports."

However, while some of U.S. industry has been affected adversely by high gas prices, other portions of the industrial sector have been rebounding, primarily as a result of the improved economy. Some of the leaders in this segment of the industrial sector are the chemical and steel industries.

Storage/Supply

Underground natural gas storage allows companies to physically stockpile natural gas supplies purchased during the summer for later use during the winter, when demand is at its peak.

Storage / Supply			
Winter Season Data Sources: ELA, EEA, Gas Daily	This Year 2004-2005		
END OF INJECTION SEASON	Est. 3,200 Bcf		
PERCENT OF AVG, FILL (FIVE-YEAR AVERAGE)	Est. 103%		
ADDITIONAL STORAGE CAPACITY	Est. 47 Bcf		
INJECTION SEASON AVG. OF PUBLISHED HENRY HUB PRICES TO DATE	\$5.80 /MMBtu		
Winter-To-Winter Pressure On Natural Gas Prices	>		
	Winter Season Data Source: ELA, EEA, Gas Daily END OF INJECTION SEASON PERCENT OF AVG, FILL (FIVE-YEAR AVERAGE) ADDITIONAL STORAGE CAPACITY INJECTION SEASON AVG. OF PUBLISHED HENRY HUB PRICES TO DATE Winter-To-Winter Pressure		

With relatively mild summer temperatures dampening the electric generation sector, weekly injections during the refill season have been running at historically high rates. Now, with less than a month left before the start of the heating season, it appears increasingly likely that North American utilities and other retail suppliers will have access to an above-average level of natural gas in storage, potentially reaching near-record inventories of 3,200 Billion cubic feet (Bcf) or more.

This means retail providers are likely to have plenty of market flexibility within the parameters of a normal winter. This, in turn, is likely to provide some market stability by helping to dampen routine coldweather price volatility in the wholesale spot markets.

However, given significantly higher summer re-fill costs, despite the projection for an increased storage level from last winter, we anticipate that this pressure point in the market will remain relatively flat. In addition, these increased summer costs will contribute to potentially higher end-use bills through the winter. If there are fewer heating degree-days than anticipated as the season unfolds, however, this extra capacity could end up resulting in downward price pressure.

Production/Supply

Overall, U.S. natural gas production is also projected to remain flat during the heating season. According to an independent projection provided by Energy and Environmental Analysis (EEA), significant increases this year in both well completions and rig count will serve only to maintain a rate of 49.7 Bcf per day (Bcf/d).

Companies are in the process of analyzing new drilling opportunities and applying for permits, but the lag time can take up to 18 months before natural gas reaches market. In fact, while it may only take a few months to drill a producing well, it may take up to several years to secure the permits before drilling may begin.

As a result, the U.S. will continue to rely on Canadian and LNG imports to help offset an accelerating decline-rate among existing "Lower 48" wells. Due to increased Western Canadian production and decreased Canadian demand, EEA is forecasting that Canadian imports to the U.S. could increase by as much as 11 percent this winter, compared to last winter.

Last Winter	Winter Season	FORECAST This Year
2003-2004	Data Source: EEA	2004-2005
20,624	ANNUAL WELL COMPLETIONS	24,400
874	ANNUAL AVG. RIG COUNT	1,024
50.0 Bcf/d	WINTER AVG, PRODUCTION (U.S.)	49.7 Bcf/d
8.9 Bcf/d	CANADIAN IMPORTS	9.9 Bcf/d
1.6 Bcf/d	LNG IMPORTS	2.2 Bcf/d

While still a relatively minor part of the supply equation, growth in LNG imports will also add some extra short-term market stability. With the opening of Cove Point and Elba Island facilities, LNG imports this heating season are projected to be up about 40 percent, increasing to 2.2 Bcf/d from 1.6 Bcf/d last winter, according to EEA. Remember that even at this increased level, LNG would represent only about 3 percent of an estimated 76.5 Bcf/d market.

Altogether, production and import supply factors will apply counter-balancing price pressures on the market.

Wild Cards

Hurricane Season: We've already seen a busy hurricane season so far, and some forecasters are predicting its continuation through the remainder of autumn. If there are storms of sufficient magnitude in the Gulf of Mexico, they can cause damage to platforms and gathering lines, leading to prolonged supply disruption. In addition, power outages caused by hurricane activity could result in decreased natural gas demand.

Infrastructure Disruptions: The 2003 blackout in the Northeast is a prime example of the kind of catastrophic infrastructure event that, while unforeseen, can affect not only the energy marketplace in general, but also the fundamentals of natural gas supply and demand. Additional natural gas consumption was temporarily required in the electricity sector to help offset the loss of tripped nuclear and coal facilities in the region. In addition, we now live in an age of terrorist threats that could have a profound affect on the nation's energy infrastructure.

Middle East Unrest: Although the oil and natural gas markets are not historically correlated, the prices for the two sometimes tend to move together. Such things as continuing Middle East unrest, with its potential to disrupt petroleum imports, could then affect the natural gas markets, as well.

National Election Outcome: The outcome of the national election could have a slight impact on the movement of natural gas markets, especially in terms of the futures market, and cannot be overlooked as a potential wildcard.

Enhanced Market Transparency: Enhanced market transparency is a piece of good news this heating season. Steps have been taken by the Federal Energy Regulatory Commission (FERC) to help enhance market transparency via price reporting by the various published indices, which has, according to a recent FERC survey, yielded greater customer confidence in the marketplace. There is potential for this to increase confidence in natural gas markets, which could in turn have a positive affect in terms of additional market competition this heating season. In some respects, it could even help to reduce some of the volatility associated with severe winter weather.

Conclusion

NGSA does not forecast natural gas prices. Government and other published reports, however, indicate a mixed bag with some upward pressure on natural gas prices this winter, compared with the average for last winter season, primarily due to the following estimates affecting market pressure points:

- a projected colder-than-normal weather in the East and warmer-than-normal weather in the West consistent with an expected weak El Nino pattern;
- an expanding economy, some industrials rebounding;
- industrial fuel switching, closures and conservation for others;
- near-record-high storage;
- relatively flat production.

This means there will continue to be a tight balance of supply and demand in the natural gas market. That is why government and independent analysts are predicting that wholesale natural gas prices, now hovering about \$5.50/MMBtu, could be in the \$6 range on average throughout the heating season.

This Season'sWinter Outlook				
Last Winter	Winter Season	This Year		
	Weather / Demand			
	Economy / Demand	A		
	Total Demand			
	Storage / Supply			
	Production / Supply			
	Winter-To-Winter Pressure On Natural Gas Prices	UPWARD 11		

The tight balance between supply and demand also means that deviations from the forecast have the potential to more significantly affect the supply/demand equation, and consequently, customer bills through the first quarter of 2005, and perhaps beyond.

For more information, please visit www.ngsa.org, or www.naturalgas.org.

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